

Set	Items	Description
?	E	AU=BROWNLIE, JOHN

Ref	Items	Index-term
E1	70	AU=BROWNLIE, JOE
E2	1	AU=BROWNLIE, JOEL
E3	5	*AU=BROWNLIE, JOHN
E4	6	AU=BROWNLIE, JOHN D
E5	3	AU=BROWNLIE, JOHN D.
E6	3	AU=BROWNLIE, JOHN DAVI D
E7	1	AU=BROWNLIE, JOSHUA LOCKHART
E8	3	AU=BROWNLIE, K.
E9	2	AU=BROWNLIE, KATHERI NE C
E10	1	AU=BROWNLIE, KENNETH G
E11	1	AU=BROWNLIE, KENNETH SAMUEL LOGAN
E12	3	AU=BROWNLIE, L

Enter P or PAGE for more

? S E1-E12

70	AU=BROWNLIE, JOE
1	AU=BROWNLIE, JOEL
5	AU=BROWNLIE, JOHN
6	AU=BROWNLIE, JOHN D
3	AU=BROWNLIE, JOHN D.
3	AU=BROWNLIE, JOHN DAVI D
1	AU=BROWNLIE, JOSHUA LOCKHART
3	AU=BROWNLIE, K.
2	AU=BROWNLIE, KATHERI NE C
1	AU=BROWNLIE, KENNETH G
1	AU=BROWNLIE, KENNETH SAMUEL LOGAN
3	AU=BROWNLIE, L

S1 99 E1-E12

? S S1 AND STREP?

99 S1  
1478388 STREP?

S2 3 S1 AND STREP?

? T S2/3, K/1-3

&gt;&gt;&gt;KW C option is not available in file(s): 399

2/3, K/1 (Item 1 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

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151418689 CA: 151(19)418689b JOURNAL

Strain typing of Mycoplasma cynos isolates from dogs with respiratory disease

AUTHOR(S): Mannering, Sally A.; McAuliffe, Laura; Lawes, Joanna R.; Erles, Kerstin; Brownlie, Joe

LOCATION: The Royal Veterinary College, Hatfield, UK, AL9 7TA

JOURNAL: Vet. Microbiol. (Veterinary Microbiology) DATE: 2009 VOLUME:

135 NUMBER: 3-4 PAGES: 292-296 CODEN: VM CDQ ISSN: 0378-1135

PUBLISHER ITEM IDENTIFIER: 0378-1135(08)00434-3 LANGUAGE: English

PUBLISHER: Elsevier B. V.

2/3, K/2 (Item 2 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2010 American Chemical Society. All rts. reserv.

150537888 CA: 150(25)537888e PATENT

Vaccine comprising recombinant NS3 and recombinant E2 proteins against

pestivirus infection

INVENTOR(AUTHOR): Brownlie, Joe; Collins, Margaret; Thomas, Carole;  
Thompson, Ian

LOCATION: Switz.

ASSIGNEE: Novartis AG; Royal Veterinary College

PATENT: PCT International ; WO 200956541 A1 DATE: 20090507

APPLICATION: WO 2008EP64601 (20081028) \*EP 2007119742 (20071031)

PAGES: 41pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

IPC/8 + Level Value Position Status Version Action Source Office:

A61K-0039/12

A I F B 20060101

H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AO; AT; AU; AZ; BA; BB; BG; BH; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DO; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; GT; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LY; MA; MD; ME; MG; MK; MN; MW; MX; MY; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; ST; SV; SY; TJ; TM; TN; TR DESIGNATED REGIONAL: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LT; LU; LV; MC; MT; NL; NO; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

2/3, K/3 (Item 3 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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142133045 CA: 142(8)133045r PATENT

Vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease

INVENTOR(AUTHOR): Brownlie, John; Chalcker, Victoria Jane; Erles, Kerstin

LOCATION: UK

ASSIGNEE: The Royal Veterinary College

PATENT: PCT International ; WO 200502618 A1 DATE: 20050113

APPLICATION: WO 2004GB2865 (20040701) \*GB 200315323 (20030701)

PAGES: 102 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-039/118A; A61K-039/09B; A61K-039/02B; A61K-039/295B;

G01N-033/569B; A61P-031/04B; A61P-031/12B; C07K-016/12B

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; ME; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

? E AU=CHALKER, VICTORIA

Ref	Items	Index-term
E1	1	AU=CHALKER, V. J.
E2	1	AU=CHALKER, VICKI
E3	3	*AU=CHALKER, VICTORIA
E4	7	AU=CHALKER, VICTORIA J
E5	12	AU=CHALKER, VICTORIA J.
E6	2	AU=CHALKER, VICTORIA JANE
E7	22	AU=CHALKER, VJ
E8	2	AU=CHALKER, VJ*
E9	1	AU=CHALKER, W. R.
E10	4	AU=CHALKER, W. R.

E11 1 AU=CHALKER, WILLIAM H.  
E12 1 AU=CHALKER, WILLIAM R.

Enter P or PAGE for more

? S E1-E12

1 AU=CHALKER, V. J.  
1 AU=CHALKER, VICKI  
3 AU=CHALKER, VICTORIA  
7 AU=CHALKER, VICTORIA J.  
12 AU=CHALKER, VICTORIA J.  
2 AU=CHALKER, VICTORIA JANE  
22 AU=CHALKER, VJ  
2 AU=CHALKER, VJ\*  
1 AU=CHALKER, W R.  
4 AU=CHALKER, W R.  
1 AU=CHALKER, WILLIAM H.  
1 AU=CHALKER, WILLIAM R.

S3 57 E1-E12

? S S3 AND CANINE

57 S3  
461160 CANINE

S4 15 S3 AND CANINE

? T S4/3, K/1-15

>>>KW C option is not available in file(s): 399

4/3, K/1 (Item 1 from file: 24)  
DI ALOG(R) File 24: CSA Life Sciences Abstracts  
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0003297389 IP ACCESSION NO: 8338326  
Short communication: Serological evidence of *Mycoplasma cynos* infection in  
canine infectious respiratory disease

Rycroft, Andrew N; Tsounakou, Elizabeth; Chal ker, Victoria  
Department of Pathology & Infectious Diseases, Royal Veterinary College,  
Hawkshead Lane, North Mymms, Herts AL9 7TA, United Kingdom  
[mailto:arycroft@vc.ac.uk]

Veterinary Microbiology, v 120, n 3-4, p 358-362, March 2007  
PUBLICATION DATE: 2007

PUBLISHER: Elsevier Science, P.O. Box 211 Amsterdam 1000 AE Netherlands,  
[mailto:nlinfo-f@elsevier.nl], [URL: http://www.elsevier.nl/]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0378-1135

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Short communication: Serological evidence of *Mycoplasma cynos* infection in  
canine infectious respiratory disease

Rycroft, Andrew N; Tsounakou, Elizabeth; Chal ker, Victoria

#### ABSTRACT:

... for vacation or re-homing. The role of *Mycoplasma cynos* as an  
initiating agent in canine infectious respiratory disease was  
investigated by examining the serological response of dogs to this organism  
...

10563199a.txt

4/3, K/2 (Item 2 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
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0002576697 IP ACCESSION NO: 5876267  
Taxonomy of the canine Mollicutes by 16S rRNA gene and 16S/23S rRNA  
intergenic spacer region sequence comparison

Chalker, VJ; Brownlie, J  
Health Protection Agency, 61 Colindale Avenue, London NW9 5HT, UK,  
[mailto:vicki.chalker@hpa.org.uk]

International Journal of Systematic and Evolutionary Microbiology, v 54, n  
2, p 537-542, March 2004  
PUBLICATION DATE: 2004

DOCUMENT TYPE: Journal Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ISSN: 1466-5026  
FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Taxonomy of the canine Mollicutes by 16S rRNA gene and 16S/23S rRNA  
intergenic spacer region sequence comparison

Chalker, VJ; Brownlie, J

ABSTRACT:

The taxonomy of canine Mollicutes is described, based on  
phylogenetic analysis of 16S rRNA gene and 16S/23S rRNA...

...Mycoplasma strains, HRC 689 and VJC 358, were found to be distinct from  
all known canine mycoplasmas and all published mycoplasma 16S rRNA  
gene sequences.

4/3, K/3 (Item 3 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
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0002494140 IP ACCESSION NO: 5666363  
The association of Streptococcus equi subsp. zooepidemicus with  
canine infectious respiratory disease

Chalker, VJ; Brooks, HW; Brownlie, J  
Department of Pathology and Infectious Diseases, Royal Veterinary College,  
University of London, Hawkshead Lane, North Mymms, Hertfordshire AL9 7TA,  
UK, [mailto:vchalker@vc.ac.uk]

Veterinary Microbiology, v 95, n 1-2, p 149-156, August 2003  
PUBLICATION DATE: 2003

PUBLISHER: Elsevier Science B.V., P.O. Box 211 Amsterdam 1000 AE  
Netherlands, [mailto:nlinfo-f@elsevier.nl], [URL: http://www.elsevier.nl/]

DOCUMENT TYPE: Journal Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ISSN: 0378-1135  
FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

10563199a.txt

The association of *Streptococcus equi* subsp. *zooepidemicus* with canine infectious respiratory disease

Chalker, VJ; Brooks, HW; Brownlie, J

ABSTRACT:

Canine infectious respiratory disease (CIRD) is a multi-factorial infection that affects many kennelled dogs despite...

4/3, K/4 (Item 4 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
(c) 2010 CSA. All rights reserved.

0002476341 IP ACCESSION NO: 5622422  
Respiratory Disease in Kennelled Dogs: Serological Responses to *Bordetella bronchiseptica* Lipopolysaccharide Do Not Correlate with Bacterial Isolation or Clinical Respiratory Symptoms

Chalker, VJ\*; Toomey, C; Opperman, S; Brooks, HW; Ibuoye, MA;  
Brownlie, J; Rycroft, AN  
Department of Pathology & Infectious Diseases, Royal Veterinary College,  
University of London, Hawkshead Lane, North Mymms, Hertfordshire AL9 7TA,  
United Kingdom [mailto:vchalker@vc.ac.uk]

Clinical and Diagnostic Laboratory Immunology, v 10, n 3, p 352-356, May  
2003  
PUBLICATION DATE: 2003

DOCUMENT TYPE: Journal Article  
RECORD TYPE: Abstract  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ISSN: 1071-412X  
FILE SEGMENT: Immunology Abstracts; Bacteriology Abstracts (Microbiology B)  
Chalker, VJ\*; Toomey, C; Opperman, S; Brooks, HW; Ibuoye, MA;  
Brownlie, J; Rycroft, AN

ABSTRACT:

The role of *Bordetella bronchiseptica* in a natural outbreak of canine infectious respiratory disease was investigated both by culture and serological analysis. *B. bronchiseptica* was found...

4/3, K/5 (Item 1 from file: 76)  
DIALOG(R) File 76: Environmental Sciences  
(c) 2010 CSA. All rights reserved.

0002108713 IP ACCESSION NO: 8338326  
Short communication: Serological evidence of *Mycoplasma cynos* infection in canine infectious respiratory disease

Rycroft, Andrew N; Tsounakou, Elizabeth; Chalker, Victoria  
Department of Pathology & Infectious Diseases, Royal Veterinary College,  
Hawkshead Lane, North Mymms, Herts AL9 7TA, United Kingdom  
[mailto:arycroft@vc.ac.uk]

Veterinary Microbiology, v 120, n 3-4, p 358-362, March 2007  
PUBLICATION DATE: 2007

PUBLISHER: Elsevier Science, P.O. Box 211 Amsterdam 1000 AE Netherlands,  
Page 5

[mailto:nlinfo-f@elsevier.nl], [URL: http://www.elsevier.nl/]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0378-1135

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Short communication: Serological evidence of *Mycoplasma cynos* infection in canine infectious respiratory disease

Rycroft, Andrew N; Tsounakou, Elizabeth; Chalker, Victoria

ABSTRACT:

... for vacation or re-homing. The role of *Mycoplasma cynos* as an initiating agent in canine infectious respiratory disease was investigated by examining the serological response of dogs to this organism ...

4/3, K/6 (Item 2 from file: 76)  
DIALOG(R) File 76: Environmental Sciences  
(c) 2010 CSA. All rights reserved.

0001699527 IP ACCESSION NO: 5876267  
Taxonomy of the canine Mollicutes by 16S rRNA gene and 16S/23S rRNA intergenic spacer region sequence comparison

Chalcher, VJ; Brownlie, J  
Health Protection Agency, 61 Colindale Avenue, London NW9 5HT, UK,  
[mailto:vicki.chalcher@hpa.org.uk]

International Journal of Systematic and Evolutionary Microbiology, v 54, n 2, p 537-542, March 2004  
PUBLICATION DATE: 2004

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 1466-5026

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Taxonomy of the canine Mollicutes by 16S rRNA gene and 16S/23S rRNA intergenic spacer region sequence comparison

Chalcher, VJ; Brownlie, J

ABSTRACT:

The taxonomy of canine Mollicutes is described, based on phylogenetic analysis of 16S rRNA gene and 16S/23S rRNA...

... *Mycoplasma* strains, HRC 689 and VJC 358, were found to be distinct from all known canine mycoplasmas and all published mycoplasma 16S rRNA gene sequences.

4/3, K/7 (Item 3 from file: 76)  
DIALOG(R) File 76: Environmental Sciences  
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10563199a.txt

0001656849 IP ACCESSI ON NO: 5666363

The association of Streptococcus equi subsp. zooepidemicus with canine infectious respiratory disease

Chalker, VJ; Brooks, HW; Brownlie, J  
Department of Pathology and Infectious Diseases, Royal Veterinary College,  
University of London, Hawkshead Lane, North Mymms, Hertfordshire AL9 7TA,  
UK, [mailto:vchalker@vc.ac.uk]

Veterinary Microbiology, v 95, n 1-2, p 149-156, August 2003  
PUBLICATION DATE: 2003

PUBLISHER: Elsevier Science B.V., P.O. Box 211 Amsterdam 1000 AE  
Netherlands, [mailto:nlinfo-f@elsevier.nl], [URL:http://www.elsevier.nl/]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0378-1135

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

The association of Streptococcus equi subsp. zooepidemicus with canine infectious respiratory disease

Chalker, VJ; Brooks, HW; Brownlie, J

#### ABSTRACT:

Canine infectious respiratory disease (CIRD) is a multi-factorial infection that affects many kennelled dogs despite...

4/3, K/8 (Item 4 from file: 76)  
DIALOG(R) File 76: Environmental Sciences  
(c) 2010 CSA. All rights reserved.

0001649527 IP ACCESSI ON NO: 5622422

Respiratory Disease in Kennelled Dogs: Serological Responses to Bordetella bronchiseptica Lipopolysaccharide Do Not Correlate with Bacterial Isolation or Clinical Respiratory Symptoms

Chalker, VJ\*; Toomey, C; Opperman, S; Brooks, HW; Ibuoye, MA;  
Brownlie, J; Rycroft, AN  
Department of Pathology & Infectious Diseases, Royal Veterinary College,  
University of London, Hawkshead Lane, North Mymms, Hertfordshire AL9 7TA,  
United Kingdom [mailto:vchalker@vc.ac.uk]

Clinical and Diagnostic Laboratory Immunology, v 10, n 3, p 352-356, May 2003

PUBLICATION DATE: 2003

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 1071-412X

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Chalker, VJ\*; Toomey, C; Opperman, S; Brooks, HW; Ibuoye, MA;  
Brownlie, J; Rycroft, AN

#### ABSTRACT:

The role of Bordetella bronchiseptica in a natural outbreak of

10563199a.txt

canine infectious respiratory disease was investigated both by culture and serological analysis. B. bronchi septica was found...

4/3, K/9 (Item 1 from file: 98)  
DI ALOG(R) File 98: General Sci Abs  
(c) 2010 The HW Wilson Co. All rts. reserv.

5765273 H.W. WILSON RECORD NUMBER: BGSA04252959  
Mycoplasmas associated with canine infectious respiratory disease  
Chalker, Victoria J  
Owen, Wanda M. A.; Paterson, Caren  
Microbiology v. 150 pt 10 (October 2004) p. 3491-7  
DOCUMENT TYPE: Feature Article  
SPECIAL FEATURES: Bibliography Graph Illustration Table ISSN: 1350-0872  
LANGUAGE: English  
COUNTRY OF PUBLICATION: United Kingdom

Mycoplasmas associated with canine infectious respiratory disease  
Chalker, Victoria J

4/3, K/10 (Item 1 from file: 399)  
DI ALOG(R) File 399: CA SEARCH(R)  
(c) 2010 American Chemical Society. All rts. reserv.

142133045 CA: 142(8)133045r PATENT  
Vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease  
INVENTOR(AUTHOR): Brownlie, John; Chalker, Victoria Jane; Erles, Kerstin  
LOCATION: UK  
ASSIGNEE: The Royal Veterinary College  
PATENT: PCT International ; WO 200502618 A1 DATE: 20050113  
APPLICATION: WO 2004GB2865 (20040701) \*GB 200315323 (20030701)  
PAGES: 102 pp. CODEN: PIXD2 LANGUAGE: English  
PATENT CLASSIFICATIONS:  
CLASS: A61K-039/118A; A61K-039/09B; A61K-039/02B; A61K-039/295B;  
G01N-033/569B; A61P-031/04B; A61P-031/12B; C07K-016/12B  
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW  
DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

4/3, K/11 (Item 2 from file: 399)  
DI ALOG(R) File 399: CA SEARCH(R)  
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142130661 CA: 142(8)130661c JOURNAL  
Mycoplasmas associated with canine infectious respiratory disease  
AUTHOR(S): Chalker, Victoria J.; Owen, Wanda M. A.; Paterson, Caren; Barker, Emily; Brooks, Harriet; Rycroft, Andrew N.; Brownlie, Joe  
LOCATION: Department of Pathology and Infectious Diseases, Royal Veterinary College (RVC), University of London, North Mymms, UK, AL9 7TA  
JOURNAL: Microbiology (Reading, U. K.) (Microbiology (Reading, United Kingdom)) DATE: 2004 VOLUME: 150 NUMBER: 10 PAGES: 3491-3497 CODEN:



MROBEO ISSN: 1350-0872 LANGUAGE: English PUBLISHER: Society for General Microbiology

4/3, K/12 (Item 3 from file: 399)  
 DI ALOG(R) File 399: CA SEARCH(R)  
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141153654 CA: 141(10)153654w JOURNAL  
 Taxonomy of the canine Mollicutes by 16S rRNA gene and 16S/23S rRNA  
 intergenic spacer region sequence comparison  
 AUTHOR(S): Chalcker, Victoria J.; Brownlie, Joe  
 LOCATION: Department of Pathology and Infectious Diseases, Royal  
 Veterinary College, Hertfordshire, UK, AL9 7TA  
 JOURNAL: Int. J. Syst. Evol. Microbiol. (International Journal of  
 Systematic and Evolutionary Microbiology) DATE: 2004 VOLUME: 54 NUMBER:  
 2 PAGES: 537-542 CODEN: ISEMF5 ISSN: 1466-5026 LANGUAGE: English  
 PUBLISHER: Society for General Microbiology

4/3, K/13 (Item 4 from file: 399)  
 DI ALOG(R) File 399: CA SEARCH(R)  
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140162357 CA: 140(11)162357h PATENT  
 Canine respiratory coronavirus (CRCoV) spike protein, polymerase and  
 hemagglutinin/esterase gene and use thereof in diagnosis of and vaccine  
 preparation against canine infectious respiratory disease  
 INVENTOR(AUTHOR): Brownlie, John; Chalcker, Victoria Jane; Erles, Kerstin  
 LOCATION: UK  
 ASSIGNEE: The Royal Veterinary College  
 PATENT: PCT International ; WO 200411651 A1 DATE: 20040205  
 APPLICATION: WO 2003GB2832 (20030701) \*GB 200217434 (20020727)  
 PAGES: 150 pp. CODEN: PIXXD2 LANGUAGE: English  
 PATENT CLASSIFICATIONS:  
 CLASS: C12N-015/50A; C07K-014/165B; G01N-033/50B; C12Q-001/68B;  
 C12N-007/00B

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;  
 CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;  
 GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;  
 LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU;  
 SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN;  
 YU; ZA; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU DESIGNATED REGIONAL: GH; GM; KE  
 ; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; BG; CH; CY; CZ; DE; DK;  
 EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;  
 BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

4/3, K/14 (Item 1 from file: 149)  
 DI ALOG(R) File 149: TGG Health&Wellness DB(SM)  
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03194502 SUPPLIER NUMBER: 161189361 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Serological evidence of Mycoplasma cynos infection in canine  
 infectious respiratory disease. (Author abstract)  
 Rycroft, Andrew N.; Tsounakou, Elizabeth; Chalcker, Victoria  
 Veterinary Microbiology, 120, 3-4, 358(5)  
 March 10,  
 2007

DOCUMENT TYPE: Author abstract PUBLICATION FORMAT: Magazine/Journal  
 ISSN: 0378-1135 LANGUAGE: English RECORD TYPE: Abstract  
 TARGET AUDIENCE: Academic

Serological evidence of *Mycoplasma cynos* infection in canine  
infectious respiratory disease. (Author abstract)  
... Chal ker, Victoria

... AUTHOR ABSTRACT: for vacation or re-homing. The role of *Mycoplasma*  
*cynos* as an initiating agent in canine infectious respiratory disease  
was investigated by examining the serological response of dogs to this  
organism..

4/3, K/15 (Item 2 from file: 149)  
DI ALOG(R) File 149: TGG Health&Wellness DB(SM)  
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02491832 SUPPLIER NUMBER: 124008016 (USE FORMAT 7 OR 9 FOR FULL TEXT  
)

*Mycoplasmas* associated with canine infectious respiratory  
disease. (Author Abstract)

Chal ker, Victoria J.; Owen, Wanda M A.; Paterson, Caren; Barker,  
Emily; Brooks, Harriet; Rycroft, Andrew N.; Brownlie, Joe  
Microbiology, 150, 10, 3491(7)

Oct,  
2004

DOCUMENT TYPE: Author Abstract PUBLICATION FORMAT: Magazine/Journal;  
Refereed ISSN: 1350-0872 LANGUAGE: English RECORD TYPE: Abstract  
TARGET AUDIENCE: Academic

*Mycoplasmas* associated with canine infectious respiratory  
disease. (Author Abstract)  
Chal ker, Victoria J...

AUTHOR ABSTRACT: Canine infectious respiratory disease (CIRD) is a  
complex infection that occurs worldwide predominantly in kennelled dogs...  
? E AU=ERLES, KERSTIN

Ref	Items	Index-term
E1	19	AU=ERLES, KERSTIN
E2	2	AU=ERLES, KERSTIN E-MAIL: KERLES@PVC.AC.UK
E3	0	*AU=ERLES, KERSTIN
E4	1	AU=ERLES, N.
E5	2	AU=ERLESAND L
E6	13	AU=ERLESAND U
E7	1	AU=ERLESAND, L
E8	2	AU=ERLESAND, L.
E9	1	AU=ERLESAND, LENNART
E10	2	AU=ERLESAND, U
E11	21	AU=ERLESAND, U.
E12	1	AU=ERLESAND, ULF

Enter P or PAGE for more

? S E1-E12

19	AU=ERLES, KERSTIN
2	AU=ERLES, KERSTIN E-MAIL: KERLES@PVC.AC.UK
0	AU=ERLES, KERSTIN
1	AU=ERLES, N.
2	AU=ERLESAND L
13	AU=ERLESAND U
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2	AU=ERLESAND, L.
1	AU=ERLESAND, LENNART
2	AU=ERLESAND, U
21	AU=ERLESAND, U.

1 AU=ERLESAND, ULF  
 S5 65 E1-E12  
 ? S S5 AND STREP?  
 65 S5  
 1478388 STREP?  
 S6 2 S5 AND STREP?  
 ? T S6/3, K/1-2  
 >>>KW C option is not available in file(s): 399

6/3, K/1 (Item 1 from file: 399)  
 DIALOG(R) File 399: CA SEARCH(R)  
 (c) 2010 American Chemical Society. All rts. reserv.

151418689 CA: 151(19)418689b JOURNAL  
 Strain typing of *Mycoplasma cynos* isolates from dogs with respiratory disease  
 AUTHOR(S): Mannering, Sally A.; McAuliffe, Laura; Lawes, Joanna R.; Erles, Kerstin; Brownlie, Joe  
 LOCATION: The Royal Veterinary College, Hatfield, UK, AL9 7TA  
 JOURNAL: Vet. Microbiol. (Veterinary Microbiology) DATE: 2009 VOLUME: 135  
 NUMBER: 3-4 PAGES: 292-296 CODEN: VMCDQ ISSN: 0378-1135  
 PUBLISHER ITEM IDENTIFIER: 0378-1135(08)00434-3 LANGUAGE: English  
 PUBLISHER: Elsevier B.V.

6/3, K/2 (Item 2 from file: 399)  
 DIALOG(R) File 399: CA SEARCH(R)  
 (c) 2010 American Chemical Society. All rts. reserv.

142133045 CA: 142(8)133045r PATENT  
 Vaccines comprising attenuated viruses and bacteria or antigen-encoding nucleic acids and antibodies for treating canine infectious respiratory disease  
 INVENTOR(AUTHOR): Brownlie, John; Chalcker, Victoria Jane; Erles, Kerstin  
 LOCATION: UK  
 ASSIGNEE: The Royal Veterinary College  
 PATENT: PCT International ; WO 200502618 A1 DATE: 20050113  
 APPLICATION: WO 2004GB2865 (20040701) \*GB 200315323 (20030701)  
 PAGES: 102 pp. CODEN: PIXXD2 LANGUAGE: English  
 PATENT CLASSIFICATIONS:

CLASS: A61K-039/118A; A61K-039/09B; A61K-039/02B; A61K-039/295B; G01N-033/569B; A61P-031/04B; A61P-031/12B; C07K-016/12B

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

? S ((ZOOEPI DEM CUS AND STREP?) OR (MYCOPLASMA)) AND (ANIMAL OR CANINE OR DOG OR PUP?)

Processing

Processed 10 of 52 files ...

Processing

Processed 40 of 52 files ...

Completed processing all files

4661 ZOOEPI DEM CUS  
 1478388 STREP?  
 145100 MYCOPLASMA  
 14646914 ANIMAL

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      461160 CANINE
    1035484 DOG
      530423 PUP?
S7      22815 ((ZOOEPI DEM CUS AND STREP?) OR (MYCOPLASMA)) AND (ANIMAL
              OR CANINE OR DOG OR PUP?)
? S S7 AND (RESPONSE OR INTRA? OR INOCUL? OR INJECT? OR IMMUNIZ? OR ADMINS?)
Processing
Processed 10 of 52 files ...
Processing
Processing
Processed 20 of 52 files ...
Processing
Processed 40 of 52 files ...
Completed processing all files
      22815 S7
    14256283 RESPONSE
    12347517 INTRA?
      1064875 INOCUL?
    5017121 INJECT?
      955945 IMMUNIZ?
      8302 ADMINS?
S8      6994 S7 AND (RESPONSE OR INTRA? OR INOCUL? OR INJECT? OR
              IMMUNIZ? OR ADMINS?)
? S S8 AND (INACTIV? OR ATTENUAT? OR WEAK?)
Processing
Processed 40 of 52 files ...
Completed processing all files
      6994 S8
    1755628 INACTIV?
    1740646 ATTENUAT?
    2959521 WEAK?
S9      843 S8 AND (INACTIV? OR ATTENUAT? OR WEAK?)
? RD

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>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

Processing - Examined 800 records

S10 517 RD (unique items)

? S S10 AND (ZOOEPI DEM CUS OR CYNOS)

517 S10

4661 ZOOEPI DEM CUS

198 CYNOS

S11 22 S10 AND (ZOOEPI DEM CUS OR CYNOS)

? RD

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S12 22 RD (unique items)

? T S12/3, K/1-22

>>>KW C option is not available in file(s): 399

12/3, K/1 (Item 1 from file: 24)

DI ALOG(R) File 24: CSA Life Sciences Abstracts

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0004091946 IP ACCESSION NO: 12562591

Investigations into a rationally designed modified live vaccine for equine

strangles.

Borst, Luke B

, Suppl. B, v 70, n 06, p 202 p., 20090000  
PUBLICATION DATE: 2009

DOCUMENT TYPE: Book Monograph

RECORD TYPE: Abstract

LANGUAGE: English

ISBN: 9781109222883

FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Immunology Abstracts

ABSTRACT:

... properties of a disease that could be controlled or even eradicated. The agent of strangles *Streptococcus equi* ssp. *equi* has a very narrow host range, infecting Equidae almost exclusively. The majority...

...the currently available modified live vaccine strain for safety, efficacy and the molecular mechanism of attenuation. First we performed a simple safety and efficacy study in ponies using the Pinnacle super...

...electrophoresis and sequencing for single nucleotide polymorphisms (SNPs). To understand the molecular mechanism of relative attenuation of this strain, we interrogated the genome of this strain using comparative genomic sequencing. Using...

...10 genes will be the target of further studies. Next we developed a high throughput animal model to screen for attenuation of virulence gene deleted mutants. We showed that an intramuscular injection model using the zebrafish host was able to detect relative attenuation of gene deletion mutant strains. We confirmed these results using a comparable mammalian model: an intraperitoneal injection mouse model. Using these models we have developed a triple gene deletion mutant which will...

...During our experiments, we also noted that the zebrafish host developed a robust cellular inflammatory response to *Streptococcus zooepidemicus* that was not observed in infection with *S. equi*. Using whole genomic zebrafish expression arrays...

...increased expression of cytokines and factors important for growth and differentiation of phagocytes in fish injected with *S. zoo* while acute phase proteins and antimicrobial lectins were up-regulated in fish injected with *S. equi*.

DESCRIPTORS: Abscesses; Acute phase substances; Age; Animal models; Antimicrobial agents; Clinical isolates; Cytokines; Deletion mutant; Differentiation; Genomes; Host range; Immunity; Infection; Inflammation...

...Phagocytes; Pulsed-field gel electrophoresis; Single-nucleotide polymorphism; Strangles; Vaccines; Virulence; genomics; Danio rerio; Equidae; Streptococcus; Streptococcus equi

12/3, K/2 (Item 1 from file: 50)  
DIALOG(R) File 50: CAB Abstracts  
(c) 2010 CAB International. All rights reserved.

0010147592 CAB Accession Number: 20103127545

Immunisation of the equine uterus against *Streptococcus equi* subspecies *zooepidemicus* using an intranasal attenuated

Salmonella vector.

Causey, R. C.; Artiushin, S. C.; Crowley, I. F.; Weber, J. A.; Homola, A. D.; Kelley, A.; Stephenson, L. A.; Opitz, H. M.; Guilmain, S.; Timoney, J. F.

Author email address: robert.causey@umt.maine.edu

Department of Animal and Veterinary Sciences and the Maine Agriculture and Forestry Experiment Station, University of Maine, Orono, ME 04469-5735, USA.

Veterinary Journal vol. 184 (2): p.156-161

Publication Year: 2010

ISSN: 1090-0233

Digital Object Identifier: 10.1016/j.tvjl.2009.05.001

Publisher: Elsevier Ltd Oxford, UK

Language: English

Record Type: Abstract

Document Type: Journal article

Immunisation of the equine uterus against Streptococcus equi subspecies zooepidemicus using an intranasal attenuated Salmonella vector.

Attenuated Salmonella enterica serovar Typhimurium MGN707, expressing the SzP protective protein of the MB9 serovar of Streptococcus equi subspecies zooepidemicus (SzP-MB9) was tested for its safety and efficacy as a nebulised intranasal vaccine against streptococcal uterine infections in mares. In a preliminary study, vaccinated mares (n=5) displayed serum, nasal...

... uterine washes (P<0.05). Assuming the uteri of all nine mares were free of streptococci prior to challenge with 6.3x10<sup>9</sup> SUP 9 colony forming units of S. e. zooepidemicus MB9, significantly fewer S. e. zooepidemicus were cultured from the uterine flushings of expressor-vaccinated mares (n=4) compared to control...

... DESCRIPTORS: immunization;

... ORGANISM DESCRIPTORS: Streptococcaceae; ...

... Streptococcus; ...

... Streptococcus equi...

... Streptococcus equi subsp. zooepidemicus

... BROADER TERMS: Streptococcaceae; ...

... Streptococcus; ...

... Streptococcus equi

CABI CODES: Animal Immunology, (New March 2000) (LL650...

... Animal Reproduction and Embryology, (New March 2000) (LL250

12/3, K/3 (Item 2 from file: 50)

DI ALOG(R) File 50: CAB Abstracts

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0009510138 CAB Accession Number: 20083092287

Efficacy of inactivated vaccine based on Streptococcus equi subsp. zooepidemicus of porcine origin against virulent challenge in mouse model.

Fan HongJie; Lu ChengPing

Author email address: fhj-68@sohu.com; lucp@jau.edu.cn

Key Laboratory of Animal Disease Diagnostic and Immunology, Ministry of

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Agriculture, Nanjing Agricultural University, Nanjing 210095, China.

Scientia Agricultura Sinica vol. 41 (2): p.613-618

Publication Year: 2008

ISSN: 0578-1752

Publisher: Editorial Department of Scientia Agricultura Sinica  
Beijing, China

Language: Chinese Summary Language: English

Record Type: Abstract

Document Type: Journal article

Efficacy of inactivated vaccine based on Streptococcus equi subsp. zooepidemicus of porcine origin against virulent challenge in mouse model.

[Objective] In order to evaluate the antigenic variability of Streptococcus equi subsp. zooepidemicus of pig origin isolated in different regions in China and provide a guidance for development of vaccine of Streptococcus. [Method] Groups of 12-week-old inbred ICR mice (10 mice per group) were immunized with formalin-inactivated whole bacterium cells of one of the 10 local isolates in complete Freund's adjuvant...

... in incomplete Freund's adjuvant four weeks later. Groups of vaccinated and control mice were intraperitoneally challenged with 5 LD SUB 50 homogenous strains or  $1.6 \times 10^5$  CFU of heterologous ATCC35246 strain two weeks post-vaccination. [Result] The results showed that at least 90% immunized mice were protected against homogenous challenges except the immunized group of CG-74-63, and 80 or more immunized mice were protected against heterologous ATCC35246 challenge. [Conclusion] There is no significant antigenic variability among the 10 Streptococcus equi subsp. zooepidemicus isolates of pig origin, the Streptococcus vaccine made one of vaccine strain can provided enough protection.

... DESCRIPTORS: immunization; ...

... inactivated vaccines

... ORGANISM DESCRIPTORS: Streptococcus equi subsp. zooepidemicus

... BROADER TERMS: Streptococcus equi...

... Streptococcus; ...

... Streptococcaceae;

... CABI CODES: Animal Immunology, (New March 2000) (LL650

12/3, K/4 (Item 3 from file: 50)

DI ALOG(R) File 50: CAB Abstracts

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0009503084 CAB Accession Number: 20083081812

IdeE reduces the bactericidal activity of equine neutrophils for Streptococcus equi.

Timoney, J. F.; Yang, J. D.; Liu, J.; Merant, C.

Author email address: jtimoney@email.uky.edu

Gluck Equine Research Center, Department of Veterinary Science, University of Kentucky, Lexington, KY 40546-0099, USA.

Veterinary Immunology and Immunopathology vol. 122 (1/2): p.76-82

Publication Year: 2008

ISSN: 0165-2427

Publisher: Elsevier Amsterdam Netherlands

Language: English

Record Type: Abstract

Document Type: Journal article

IdeE reduces the bactericidal activity of equine neutrophils for Streptococcus equi .

Streptococcus equi ( S. equi ) causes equine strangles, a highly contagious and widespread purulent lymphadenitis of the...  
... equi into culture medium was detected during the exponential phase of growth. The closely related Streptococcus zooepidemicus appeared to store the protein but not to release it. Antiphagocytic activity for equine neutrophils was dose-dependent and neutralized by IdeE-specific antiserum. Biotinylated IdeE bound weakly to about 77% of purified equine neutrophils and strongly to the remainder.

... DESCRIPTORS: immune response;  
... ORGANISM DESCRIPTORS: Streptococcus equi  
... BROADER TERMS: Streptococcus; ...

... Streptococcaceae;  
CABI CODES: Animal Immunology, (New March 2000) (LL650...

12/3, K/5 (Item 4 from file: 50)  
DIALOG(R) File 50: CAB Abstracts  
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0009146469 CAB Accession Number: 20063226491

Making sense of equine uterine infections: the many faces of physical clearance.

Causey, R. C.

Author email address: robert.causey@umt.maine.edu

Department of Animal and Veterinary Sciences, Maine Agriculture and Forestry Experiment Station, University of Maine, Orono, ME 04469-5735, USA.

Veterinary Journal vol. 172 (3): p. 405-421

Publication Year: 2006

ISSN: 1090-0233

Digital Object Identifier: 10.1016/j.tvjl.2005.08.005

Publisher: Elsevier Amsterdam Netherlands

Language: English

Record Type: Abstract

Document Type: Journal article

... oviduct and uterus leads to loss of the conceptus and mares susceptible to infection have weakened uterine defences partly due to retention of inflammatory exudate. Bacteria may trigger inflammation, resist phagocytosis...

... inflammation, and isolation of typical organisms and susceptible mares may be identified by detection of intrauterine fluid during oestrus, or at 6-48 h post-breeding. Therapy includes oxytocin, uterine lavage...

... indicate additive benefits of oxytocin and antibiotics. Improved conception rates have been associated with autologous, intrauterine plasma, despite controversy about its bactericidal efficacy. Because of the potential for endometrial damage, intrauterine antiseptics require caution.

... ORGANISM DESCRIPTORS: Streptococcus equi subsp.  
zooepidemicus

... BROADER TERMS: Streptococcus equi...

... Streptococcus; ...

... Streptococcaceae;



... CABI CODES: Diagnosis of Animal Diseases, (New March 2000)  
(LL886)

12/3, K/6 (Item 5 from file: 50)  
DI ALOG(R) File 50: CAB Abstracts  
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0007358384 CAB Accession Number: 19972206319  
Diagnosis and control of streptococcal endometritis in sows.  
She BoRong; Yuan Sheng; Chen Ling  
Chinese Journal of Veterinary Medicine vol. 21 (10): p.17-18  
Publication Year: 1995  
Language: Chinese  
Record Type: Abstract  
Document Type: Journal article

Diagnosis and control of streptococcal endometritis in sows.

... affecting both sows (79.1% and replacement gilts (13.2%). The disease was diagnosed as *Streptococcus zooepidemicus* type C infection, based on clinical manifestations, anatomical changes, bacterial culture and isolation, and biochemical...

... the same time, all the boars, sows and replacement gilts, including apparently healthy animals, were injected with an attenuated streptococcal vaccine (ST 17) and with an inactivated *Streptococcus autovaccine*. In combination with other measures such as disinfection of both pens and animals...

... IDENTIFIERS: *Streptococcus zooepidemicus*;  
... ORGANISM DESCRIPTIONS: *Streptococcus equi* subsp.  
*zooepidemicus*  
... BROADER TERMS: *Streptococcus equi*...

... *Streptococcus*; ...

... *Streptococcaceae*;  
... CABI CODES: Animal Physiology and Biochemistry (Excluding Nutrition) (LL600)

12/3, K/7 (Item 6 from file: 50)  
DI ALOG(R) File 50: CAB Abstracts  
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0007302242 CAB Accession Number: 19972200274  
Study of streptococcosis in beavers.  
Chen YongLin; Guang FuShi; Li QingZhen; Zhang FengYing  
China National Institute for Control of Veterinary Pharmaceuticals,  
Beijing 100081, China.  
Chinese Journal of Veterinary Medicine vol. 21 (6): p.18-20  
Publication Year: 1995  
Language: Chinese  
Record Type: Abstract  
Document Type: Journal article

Study of streptococcosis in beavers.

... Gubei Wildlife Breeding Farm, Hebei, China in 1992-94. The pathogen was confirmed to be *Streptococcus zooepidemicus* Group C. The disease was controlled effectively by using an inactivated vaccine, prepared from the bacterial strains isolated from the dead animals on the

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farm Type differences were observed in the *S. zooepidemicus* strain isolated from the beavers and those originating from pigs and sheep. The bacterium caused...

DESCRIPTORS: animal diseases...

...immunization; ...

...inactivated vaccines

...IDENTIFIERS: *Streptococcus zooepidemicus*

...ORGANISM DESCRIPTORS: *Streptococcus equi* subsp. *zooepidemicus*

...BROADER TERMS: *Streptococcus equi*...

...*Streptococcus*; ...

...*Streptococcaceae*;

CABI CODES: Biological Resources (Animal) (PP710...

12/3, K/8 (Item 7 from file: 50)

DIALOG(R) File 50: CAB Abstracts

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0007193880 CAB Accession Number: 19962205076

Characterisation of murine monoclonal antibodies recognising opsonic, mouse-protective, chaining and mucosally relevant epitopes on the M protein of *Streptococcus equi* subspecies *equi*.

Timoney, J. F.; Gran, M

Gluck Equine Research Center, Department of Veterinary Science, University of Kentucky, Lexington, Kentucky 40546-0099, USA.

Research in Veterinary Science vol. 60 (1): p. 76-81

Publication Year: 1996

ISSN: 0034-5288

Language: English

Record Type: Abstract

Document Type: Journal article

... antibodies recognising opsonic, mouse-protective, chaining and mucosally relevant epitopes on the M protein of *Streptococcus equi* subspecies *equi*.

... mutanolysin extract, but did not react with recombinant M-like protein of *S. equi* subsp. *zooepidemicus*. One mAb (2A10) showed strong opsonic activity for *S. equi* and protected mice against an...

... other mAbs were mouse-protective but not opsonic. All the mAbs elicited a strong chaining response from *S. equi*, but had only a weak chaining effect on a strain of *S. equi* (19) that expressed only 4% of the ...

... DESCRIPTORS: immune response;

... ORGANISM DESCRIPTORS: *Streptococcus equi*

BROADER TERMS: *Streptococcus*; ...

...*Streptococcaceae*;

... CABI CODES: Animal Treatment and Diagnosis (Non-Drug), (Discontinued March 2000) (LL880

12/3, K/9 (Item 1 from file: 71)

DIALOG(R) File 71: ELSEVIER BIOBASE

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0000007444 SUPPLIER NUMBER: 1994027107

A comparison of the pulmonary defenses against streptococcal infection in rats and mice following O SUB 3 exposure: Differences in disease susceptibility and neutrophil recruitment

Gilmour M.L.; Selgrade M.K.

CORRESP. AUTHOR/AFFIL: Gilmour M.L., Ctr. for Env. Medicine/Lung Biology, University of North Carolina, Chapel Hill, NC, United States

Journal: Toxicology and Applied Pharmacology (TOXICOL. APPL. PHARMACOL.), v123, n2, (211-218), 1993, United States

PUBLICATION DATE: December 13, 1993 (19931213)

CODEN: TXAPA

ISSN: 0041-008X

RECORD TYPE: Abstract; New

DOCUMENT TYPE: Article

LANGUAGES: English SUMMARY LANGUAGES: English

A comparison of the pulmonary defenses against streptococcal infection in rats and mice following O SUB 3 exposure: Differences in disease susceptibility and...

...SUB 3) exposure reduces alveolar macrophage (AM) phagocytosis in mice and increases their susceptibility to Streptococcus zooepidemicus. O SUB 3 exposure also decreases AM phagocytosis in rats but does not result in...

...SUB 3 exposure (3 hr, 0.4 or 0.8 ppm) and infection with S. zooepidemicus resulted in a dose-dependent proliferation of bacteria in the lungs of mice and high...

...2 or more days postinfection and did not alter the fatal infection. In contrast, microbial inactivation was only impaired in O SUB 3-exposed rat lungs during the first 48 hr...

...be isolated from bronchoalveolar lavage fluid between 6 and 48 hr postinfection with the peak response occurring at 24 hr. Pretreatment with anti-PMN serum eliminated the neutrophil influx and impaired further the bactericidal activity in ozone-exposed rats. The results suggest that inhaled streptococci are cleared normally from the mouse lung by AMs. Following exposure to O SUB 3...

SPECIES DESCRIPTORS:

...Streptococcus; ...

...Streptococcus equi subsp. zooepidemicus

CLASSIFICATION DESCRIPTION:

...Host defence - animal studies...

12/3, K/10 (Item 1 from file: 72)  
DIALOG(R) File 72: EMBASE  
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0081740291 EMBASE/Medline No: 2007174204

Canine respiratory viruses

ISSUE TITLE: Respiratory viruses of domestic animals

Buonavoglia C.; Martella V.

Department of Animal Health and Wellbeing, Faculty of Veterinary Medicine, Bari, Italy

AUTHOR EMAIL: c.buonavoglia@veterinaria.uni.ba.it

CORRESP. AUTHOR/AFFIL: Buonavoglia C.: Department of Animal Health and Wellbeing, Faculty of Veterinary Medicine, Bari, Italy

CORRESP. AUTHOR EMAIL: c.buonavoglia@veterinaria.uniba.it

Veterinary Research ( Vet. Res. ) (France) March 1, 2007, 38/2 (355-373)

CODEN: VEREE ISSN: 0928-4249 eISSN: 1297-9716

DOI: 10.1051/vetres:2006058

URL:

<http://www.edpsciences.org/arti cles/vet res/pdf / 2007/ 02/ v06186. pdf ?access=ok>

DOCUMENT TYPE: Journal; Review RECORD TYPE: Abstract

LANGUAGE: English SUMMARY LANGUAGE: English

NUMBER OF REFERENCES: 173

## Canine respiratory viruses

... a number of viral and bacterial pathogens have been reported as potential aetiological agents, including canine parainfluenza virus, canine adenovirus and Bordetella bronchiseptica, as well as mycoplasmas, Streptococcus equi subsp. zooepidemicus, canine herpesvirus and reovirus-1, -2 and -3. Enhancement of pathogenicity by multiple infections can result...

### DRUG DESCRIPTIONS:

... combination--cb; antigen--drug therapy--dt; antiinfective agent--drug therapy--dt; bactericide--drug therapy--dt; inactivated vaccine--drug therapy--dt; live vaccine--drug therapy--dt; live vaccine--intranasal drug administration--na; parainfluenza vaccine--drug combination--cb; parainfluenza vaccine--drug therapy--dt; parainfluenza vaccine...

### MEDICAL DESCRIPTIONS:

active immunization; Adenovirus; Adenovirus 2; bacterial infection --drug therapy--dt; Bordetella bronchiseptica; cell culture; Coronavirus; dog; drug efficacy; electron microscopy; Herpes virus; human; Influenza virus A; monotherapy; Mycoplasma; nonhuman; nose smear; Orthoreovirus; Parainfluenza virus; pathogenicity; polyacrylamide gel electrophoresis; polymerase chain reaction; Reovirus; respiratory virus; reverse transcription polymerase chain reaction; review; sequence analysis; serology; Streptococcus equi; vaccination; virus replication

12/3, K/11 (Item 1 from file: 73)

DIALOG(R) File 73: EMBASE

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0073195037 EMBASE/Medline No: 1986094071

Opsonization of bacteria by uterine secretions of cyclic mares

Brown A.E.; Hansen P.J.; Asbury A.C.

Department of Reproduction, College of Veterinary Medicine, University of Florida, Gainesville, FL 32610, United States:

CORRESP. AUTHOR/AFFIL: Department of Reproduction, College of Veterinary Medicine, University of Florida, Gainesville, FL 32610, United States

American Journal of Reproductive Immunology and Microbiology ( AM J.

REPROD. IMMUNOL. MICROBIOL. ) (United States) December 1, 1985, 9/4

(119-123)

CODEN: AJRME ISSN: 8755-8920

DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract

LANGUAGE: English

... collected from mares before and after bacterial-induced inflammation were assayed for ability to opsonize Streptococcus zooepidemicus for phagocytosis by polymorphonuclear leukocytes. Opsonization was measured as the peak phagocytic rate of bacteria...

... on day 10 postovulation. In a second experiment,  $7 \times 10^9$  live S. zooepidemicus were inoculated into the uterus of five mares

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during estrus. Uterine flushings collected at the estrus before inoculation or at the estrus after inoculation did not opsonize bacteria. Four of five flushings collected 6 hr post inoculation, however, were capable of opsonization. Based on heat inactivation at 56(deg) C, the opsonizing activity of one of four flushes was due to a complement protein. It was concluded that one aspect of the acute inflammatory response of the mare's uterus is accumulation of opsonins in the uterine lumen.

MEDICAL DESCRIPTORS:

animal cell; blood and hemopoietic system; female genital system; horse; nonhuman; priority journal

ORIGINAL DESCRIPTORS:

12/3, K/12 (Item 1 from file: 35)  
DIALOG(R) File 35: Dissertation Abs Online  
(c) 2010 ProQuest Info&Learning. All rts. reserv.

02057997 ORDER NO: AADAA-13159418  
Characterization, immunogenicity and possible roles of *Streptococcus equi* linkage group I proteins in the pathogenesis of strangles  
Author: Muthupalani, Sureshkumar  
Degree: Ph. D.  
Year: 2005  
Corporate Source/Institution: University of Kentucky (0102)  
Source: VOLUME 65/12- B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 6233. 149 PAGES  
ISBN: 0-496-92530-X

Characterization, immunogenicity and possible roles of *Streptococcus equi* linkage group I proteins in the pathogenesis of strangles  
Descriptors: BIOLOGY, VETERINARY SCIENCE; AGRICULTURE, ANIMAL PATHOLOGY

*Streptococcus equi* is a highly host adapted clonal pathogen. A novel gene cluster of *...*

... Operon 2. A similar organization of genes is also present in the commensal *S. zooepidemicus* but with considerable differences in the sequences of *SzPSe*, *Se44.2*...

... nasal washes recognize *SzPSe*, *Se44.2* and *Se46.8*. *Se73.9* and *Se51.9* react weakly with serum antibodies although *Se51.9* induces variable mucosal antibody responses in convalescent horses. Binding...

... that *SzPSe* and *Se46.8* bind to equine fibrinogen and *Se46.8* also has a weak affinity for fibronectin. *Se44.2*, *Se73.9* and *Se51.9* aggregated equine platelets. *SzPSe*, *Se73*...

... contribute to the complex pathogenesis of strangles as adhesins and in induction of host immune response.

12/3, K/13 (Item 1 from file: 135)  
DIALOG(R) File 135: NewsRx Weekly Reports  
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0001796395 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
New findings from University of Maine in the area of *Streptococcus* published  
Vaccine Weekly, May 26, 2010, p. 11

10563199a.txt  
DOCUMENT TYPE: Editor's Choice LANGUAGE: English  
RECORD TYPE: FULLTEXT  
WORD COUNT: 342

New findings from University of Maine in the area of Streptococcus published

...TEXT: to recent research published in the Veterinary Journal ,  
"Attenuated Salmonella enterica serovar Typhimurium MGN707, expressing the SzP protective protein of the MB9 serovar of Streptococcus equi subspecies zooepidemicus (SzP-MB9) was tested for its safety and efficacy as a nebulised intranasal vaccine against streptococcal uterine infections in mares (see also Streptococcus). In a preliminary study, vaccinated mares (n = 5) displayed serum nasal and uterine responses (P < 0.05) to S. Typhimurium lipopolysaccharide (St-LPS)." "Subsequently, vaccinated mares (expressor group, n = 7), but not...

...challenge with  $6.3 \times 10^9$  colony forming units of S. e. zooepidemicus MB9, significantly fewer S. e. zooepidemicus were cultured from the uterine flushings of expressor-vaccinated mares (n = 4) compared to control-vaccinated mares (n = 5) (P < 0.001)," wrote R.C. Causey and colleagues, University of Maine. The researchers...

...zooepidemicus using an intranasal attenuated Salmonella vector. Veterinary Journal , 2010;184(2):156-161). For additional information, contact R.C. Causey, University of Maine, Dept. of Animal & Vet. Science, Orono, ME 04469, USA. The publisher's contact information for the Veterinary Journal is: Elsevier Science Ltd., the Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, Oxon, England. Keywords: City: Orono, State...

...Research This article was prepared by Vaccine Weekly editors from staff and other reports. Copyright 2010, Vaccine Weekly via NewsRx.com

... DESCRIPTORS: Enterobacteriaceae; Gammaproteobacteria;  
Gram Negative Bacteria; Gram Negative Facultatively  
Anaerobic Rods; Gram Positive Cocci; Salmonella Vaccines  
; Streptococcaceae  
SUBJECT HEADINGS: Streptococcus

12/3, K/14 (Item 1 from file: 357)  
DIALOG(R) File 357: Derwent Biotech Res.  
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0258640 DBR Accession No.: 2000-13130 PATENT  
Use of live attenuated bacteria in vaccines, particularly for preventing diseases in horses, by administration submucosally, avoiding severe local reactions - recombinant vaccine preparation  
AUTHOR: Jacobs A A C; Goovaerts D  
CORPORATE SOURCE: Arnhem, The Netherlands.  
PATENT ASSIGNEE: Akzo-Nobel 2000  
PATENT NUMBER: EP 1023903 PATENT DATE: 20000802 WPI ACCESSION NO.:  
2000-516028 (2047)  
PRIORITY APPLIC. NO.: EP 99200202 APPLIC. DATE: 19990126  
NATIONAL APPLIC. NO.: EP 2000200216 APPLIC. DATE: 20000120  
LANGUAGE: English

Use of live attenuated bacteria in vaccines, particularly for preventing diseases in horses, by administration submucosally, avoiding severe local...

ABSTRACT: Use of live attenuated bacteria for making vaccines for submucosal administration. Live bacteria of the attenuated deletion mutant *Streptococcus equi* TW28 was formulated and administered submucosally to the lips of horses. Animals vaccinated in

... reactions, appeared to be in good condition and had a normal appetite. Animals given comparable intramuscular injections developed large abscesses which were persistent and continued to grow until they burst. All vaccinated animals were completely protected against the challenge. The live attenuated bacteria are particularly used to prevent infection in cattle, pigs, dogs or especially horses and specifically where caused by *Streptococcus equi* or *Streptococcus zooepidemicus*. Submucosal vaccination gives good protection with only minor local reaction. The bacteria are the horse pathogens *S. equi*, *S. zooepidemicus*, *Rhodococcus equi*, *Corynebacterium pseudotuberculosis*, *Pseudomonas mallei*, *Actinobacillus equuli* and *Pastuerella multocida*. (17pp)

DESCRIPTORS: recombinant vaccine prep., *Streptococcus equi*, *Streptococcus zooepidemicus*, appl. horse, cattle, pig, dog *Rhodococcus equi*, *Corynebacterium pseudotuberculosis*, *Pseudomonas mallei*, *Actinobacillus equuli*, *Pastuerella multocida* bacterium mammal animal (Vol. 19, No. 23)

12/3, K/15 (Item 2 from file: 357)  
 DIALOG(R) File 357: Derwent Biotech Res.  
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0233979 DBR Accession No.: 99-04080 PATENT  
 Use of live attenuated bacterium e.g. *Streptococcus equi* - for production of vaccine against *S. equi* infection  
 AUTHOR: Jacobs A A C  
 CORPORATE SOURCE: Arnhem The Netherlands.  
 PATENT ASSIGNEE: Akzo-Nobel 1999  
 PATENT NUMBER: EP 894500 PATENT DATE: 990203 WPI ACCESSION NO.: 99-108069 (9910)  
 PRIORITY APPLIC. NO.: EP 97202365 APPLIC. DATE: 970729  
 NATIONAL APPLIC. NO.: EP 98202512 APPLIC. DATE: 980727  
 LANGUAGE: English

Use of live attenuated bacterium e.g. *Streptococcus equi*  
 ABSTRACT: The use of a live attenuated *Streptococcus equi* bacterium in the manufacture of a vaccine against *S. equi*, is claimed. The attenuated virus is useful in production of a vaccine against *S. equi* infection, by systemic administration. Systemic administration directly stimulates the nasopharyngeal immune response obtaining a very high level of protection against strangles. The vaccine preferably also contains an adjuvant or another attenuated pathogen, or antigenic material from another pathogen, particularly Potomac fever agent, *Rhodococcus equi*, *Clostridium tetani*, *Mycobacterium pseudomallei*, *Streptococcus zooepidemicus*, vesicular stomatitis virus, Borna-disease virus, horse influenza, African-horse-sickness virus, horse arteritis virus...  
 DESCRIPTORS: live attenuated *Streptococcus equi*, strangles vaccine prep., appl. horse vaccination bacterium animal mammal (Vol. 18, No. 8)

12/3, K/16 (Item 3 from file: 357)  
 DIALOG(R) File 357: Derwent Biotech Res.  
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0227153 DBR Accession No.: 98-08750 PATENT  
 Nutria streptococcosis and pasteurellosis vaccine - Pasteurella  
 multocida and Streptococcus zooepidemicus culture  
 AUTHOR: Esepenok V A; Konopatkin A A; Panin A N; Netseplyaeva L I;  
 Gorbato va Kh S  
 PATENT ASSIGNEE: Esepenok V A; Konopatkin A A; Panin A N; Netseplyaeva L  
 I; Gorbato va Kh S 1997  
 PATENT NUMBER: RU 2099084 PATENT DATE: 971220 WPI ACCESSION NO.:  
 98-375543 (9832)  
 PRIORITY APPLIC. NO.: RU 9437007 APPLIC. DATE: 940930  
 NATIONAL APPLIC. NO.: RU 9437007 APPLIC. DATE: 940930  
 LANGUAGE: Russian

Nutria streptococcosis and pasteurellosis vaccine - Pasteurella  
 multocida and Streptococcus zooepidemicus culture  
 ABSTRACT: Pasteurella sp. and Streptococcus sp. infection in coypu  
 (nutria) may be prevented more effectively using a divalent vaccine  
 containing 4 strains. The vaccine is prepared by culturing  
 Streptococcus zooepidemicus (VGNKI K-DEP, 10(9) cells/ml)  
 and Pasteurella multocida (VGNKI 6011, 2394 and 1015...  
 ... a medium containing glucose, formalin, 3% aluminum hydroxide solution  
 and saponin. In an example, S. zooepidemicus and P. multocida  
 were cultured, combined in equal quantities and inactivated with  
 a 0.3% formalin solution. A 3% Al (OH)<sub>3</sub> solution was then added...  
 ... 100 mg/l biomass) was added. A group of 205 nutrias received 2 i.m.  
 injections of the vaccine in 1.0 and 1.5 ml doses. After one  
 month observation...  
 DESCRIPTORS: Pasteurella multocida, Streptococcus zooepidemicus  
 cell culture appl. coypu bacterium infection vaccine fermentation  
 nutria mammal animal (Vol. 17, No. 20)

12/3, K/17 (Item 4 from file: 357)  
 DIALOG(R) File 357: Derwent Biotech Res.  
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0227152 DBR Accession No.: 98-08749 PATENT  
 Nutria streptococcosis and pasteurellosis vaccine synthesis method -  
 Pasteurella multocida and Streptococcus zooepidemicus cell  
 culture  
 AUTHOR: Esepenok V A; Konopatkin A A; Panin A N; Netseplyaeva L I;  
 Gorbato va Kh S  
 PATENT ASSIGNEE: Esepenok V A; Konopatkin A A; Panin A N; Netseplyaeva L  
 I; Gorbato va Kh S 1997  
 PATENT NUMBER: RU 2099083 PATENT DATE: 971220 WPI ACCESSION NO.:  
 98-375542 (9832)  
 PRIORITY APPLIC. NO.: RU 9436646 APPLIC. DATE: 940930  
 NATIONAL APPLIC. NO.: RU 9436646 APPLIC. DATE: 940930  
 LANGUAGE: Russian

Nutria streptococcosis and pasteurellosis vaccine synthesis method -  
 Pasteurella multocida and Streptococcus zooepidemicus cell  
 culture  
 ABSTRACT: The efficiency of a combined vaccine against Streptococcus  
 sp. and Pasteurella sp. infection in coypu can be enhanced by  
 introducing a freezing-thawing stage into the synthesis process.  
 Streptococcus zooepidemicus (VGNKI K-DEP) and Pasteurella  
 multocida (VGNKI 6011, 2394 and 1015) are cultured separately for...  
 ... medium and frozen for 2 days at -20 deg. After thawing, the liquid  
 fraction is inactivated with 0.3-90.4% formalin solution and the  
 2 cultures are then combined in...



... hydroxide solution and saponin are added as adjuvants. In an example, a vaccine sample containing Streptococcus sp., and Pasteurella sp. components was frozen for 2 days at -20 deg and thawed...

... suspensions were combined and shaken with Al(OH)<sub>3</sub> and saponin. The resultant vaccine was injected 2 times i.m into nutrias in 1.0 and 1.5 ml doses, and...

... 451 survived (98.4%, compared to a 33.3% survival figure for a control group immunized with a diplococcal septicemia preparation. (4pp)

DESCRIPTORS: Pasteurella multocida, Streptococcus zooepidemicus  
culture appl. coypu bacterium infection vaccine fermentation mammal  
animal nutria (Vol. 17, No. 20)

12/3, K/18 (Item 5 from file: 357)  
DI ALOG(R) File 357: Derwent Biotech Res.  
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0227150 DBR Accession No.: 98-08747 PATENT  
Nutria anti-Streptococcus sp. vaccine synthesis method -  
Streptococcus zooepidemicus culture  
AUTHOR: Esepenok V A; Konopatkin A A; Panin A N; Gorbato va Kh S  
PATENT ASSIGNEE: Esepenok V A; Konopatkin A A; Panin A N; Gorbato va Kh S  
1997  
PATENT NUMBER: RU 2099081 PATENT DATE: 971220 WPI ACCESSION NO.:  
98-375540 (9832)  
PRIORITY APPLIC. NO.: RU 9436645 APPLIC. DATE: 940930  
NATIONAL APPLIC. NO.: RU 9436645 APPLIC. DATE: 940930  
LANGUAGE: Russian

Nutria anti-Streptococcus sp. vaccine synthesis method -  
Streptococcus zooepidemicus culture  
ABSTRACT: The efficiency of a combined vaccine against Streptococcus  
sp. infection in coypu can be enhanced by introducing a bacteria  
destruction stage into the synthesis process. Streptococcus  
zooepidemicus (VGNKI K-DEP) is cultured for 18 to 24 hr at 37-38  
deg in...

...9) cells/ml. The resultant culture is then frozen and thawed. The liquid  
fraction is inactivated for 44-50 hr with 0.3-90.4% formalin  
solution, a 3% aluminum hydroxide...

... concentration of 10% w.r.t. culture volume. In an example, a vaccine  
sample containing Streptococcus zooepidemicus was cultured  
for 18-22 hr in a culture medium containing Al(OH)<sub>3</sub>, formalin...

...frozen for 2 days at -20 deg and thawed at RT. The liquid fraction was  
inactivated and mixed with an adjuvant. The resultant vaccine was  
injected i.m into 903 nutrias in 1.0 and 1.5 ml doses, resulting  
in...

DESCRIPTORS: Streptococcus zooepidemicus cell culture appl.  
coypu bacterium infection vaccine fermentation nutria mammal  
animal (Vol. 17, No. 20)

12/3, K/19 (Item 1 from file: 457)  
DI ALOG(R) File 457: The Lancet  
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Molecular basis of group A streptococcal virulence

Bisno, A L; Brito, M O; Collins, C M

The Lancet Infectious Diseases vol. 3, 4 PP: 191-200 Apr 2003

DOCUMENT TYPE: PERIODICAL; General Information LANGUAGE: English

RECORD TYPE: New; Fulltext

LENGTH: 10 Pages

WORD COUNT: 10354

Molecular basis of group A streptococcal virulence

TEXT:

The group A streptococcus (GAS) (*Streptococcus pyogenes*) is among the most common and versatile of human pathogens. It is responsible for...

...complement pathway and thus evade phagocytosis and killing by polymorphonuclear leucocytes. Extracellular toxins, including superantigenic streptococcal pyrogenic exotoxins, contribute to tissue invasion and initiate the cytokine storm felt responsible for illnesses such as necrotising fasciitis and the highly lethal streptococcal toxic shock syndrome. Progress has been made in understanding the molecular epidemiology of acute rheumatic...

...goal are being aggressively pursued.

Lancet Infect Dis 2003; 3: 191-200

The group A streptococcus (GAS) (*Streptococcus pyogenes*) is among the most ubiquitous and versatile of human bacterial pathogens. The litany of...

...five-state laboratory and population-based surveillance study between 1995 and 1999, invasive group A streptococcal infections occurred at a rate of 3.6 per 100 000 population annually in the...

...for pneumonia, necrotising fasciitis, and central nervous system infections exceeded 20% while the ratio for streptococcal toxic shock syndrome was 44.5%. Equally remarkable is the propensity of GAS to elicit two delayed, non-suppurative sequelae: acute rheumatic fever and acute post-streptococcal glomerulonephritis. The former continues to be a leading cause of cardiovascular morbidity and mortality in... antipositive surface proteins continue to be described.<sup>21</sup> For example, Mac, a secreted group A streptococcal protein with homology to a human beta2 integrin, binds to CD16 on the surface of...

...hyaluronate synthase, hasB codes for UDP-glucose dehydrogenase and hasC encodes UDP-glucose pyrophosphorylase.<sup>24</sup> However, inactivation of the hasC does not affect capsule production, suggesting that an alternative source of UDP-glucose is available to the bacteria for capsule production.<sup>25</sup>

Streptococcal strains vary greatly in their degree of encapsulation, and those with the most exuberant capsule...

...causing uncomplicated pharyngitis exhibited a mucoid morphology. By contrast 21% of strains that caused serious streptococcal infections in normally sterile sites and 42% of isolates from rheumatic fever cases were mucoid...

...to oral epithelial cells.<sup>35,36</sup> Furthermore, LTA and anti-LTA passively protected mice against streptococcal challenge.<sup>37</sup> It has been proposed that LTA serves by hydrophobic interactions as a "first...to both throat and skin. These include protein F1 (PrtF1),<sup>47</sup> also known as SfbI (streptococcal fibronectin binding protein),<sup>48</sup> and related proteins known as SfbII,<sup>49</sup> FBP54,<sup>50</sup> protein F2,<sup>51</sup> and PFBP.<sup>52</sup> Protein F/SfbI facilitates adherence to respiratory epithelial cells,<sup>53</sup> and intranasal vaccination with this protein protected mice from challenge with lethal doses of virulent GAS.<sup>54...</sup>

... M negatives, even though the protein is apparently not required for initial adherence.

In an animal model of colonisation and infection<sup>59</sup> mice inoculated intranasally with an encapsulated GAS strain had more persistent throat colonisation and higher mortality than did those inoculated with an acapsular mutant.

#### Internalisation

Although GAS are not generally thought of as intracellular pathogens, experiments over the past few years have shown that the microorganisms can penetrate a...

... have been implicated in the internalisation process, which involves cytoskeletal rearrangements and interactions between the streptococcal adhesions, host integrins, and integrin ligands.<sup>61, 65</sup>

The biological significance of intracellular entry by GAS remains to be elucidated. It is possible that such penetration is the prelude to deep tissue invasion. It is, however, equally likely that such entry provides an intraepithelial sanctuary for persistence of the organism sheltered from phagocytes, humoral antibody, and antibiotics such as...

... from biopsies of infected tonsils as well as from surgically removed tonsils of symptom-free streptococcal carriers.<sup>66, 67</sup>

In contrast to M protein and fibronectin-binding proteins, the hyaluronate capsule...

... infection.<sup>71</sup> This apparent paradox was clarified when it was seen that binding of the streptococcal capsule to the hyaluronic acid-binding protein CD44 on human epithelial cells<sup>72, 73</sup> induces cytoskeletal...

... the microorganisms to remain extracellular as they penetrate the epithelium<sup>74</sup>

#### Extracellular products contributing to streptococcal virulence

GAS elaborate several extracellular products, not all of which have been well characterised. Two distinct haemolysins are elaborated. Streptolysin O (SLO), which derives its name from its oxygen lability, is reversibly inhibited by oxygen...

... lysosomes, and isolated mammalian and amphibian hearts. Moreover, it has recently been shown that another streptococcal cytotoxin, NAD glycohydrolase may be translocated into keratinocytes through SLO-induced membrane pores<sup>75</sup> SLO is...

... all GAS strains (as well as many group C and G organisms) and is antigenic.

Streptolysin S (SLS) is a haemolysin produced by streptococci growing in the presence of serum or several other substances such as serum albumin, alpha-lipoprotein, and ribonucleic acid. It exists in intracellular, cell-surface-bound, and extracellular forms and is, by weight, one of the most potent...

... damage the membranes of polymorphonuclear leucocytes, platelets, and subcellular organelles. Unlike SLO, it is not inactivated by oxygen, but it is quite thermolabile. Most GAS strains produce both haemolysins, but an...

... extracellular products may, theoretically, serve to facilitate the liquefaction of pus and the spreading of streptococci through tissue planes that are characteristic of streptococcal cellulitis and necrotising fasciitis. These include: four antigenically distinct enzymes that participate in the degradation...

... D); hyaluronidase, which enzymatically degrades hyaluronic acid present in the ground substance of connective tissue; streptokinase, which

promotes the dissolution of clots by catalysing the conversion of plasminogen to plasmin; streptococcal pyrogenic exotoxin B (Spe B), which is a potent protease; and C5a peptidase, which specifically...  
...79 Antibodies to five of the extracellular products have been used in the serodiagnosis of streptococcal infection. These are SLO, anti-DNase B, antihyaluronidase, antinicotinamide adenine dinucleotidase, and antistreptokinase.

Streptococcal inhibitor of complement (Sic) is a secreted protein produced by M1 strains that binds to...

...for efficient internalisation and killing of S pyogenes by PMNs.82

Pyrogenic exotoxins and the streptococcal toxic shock syndrome

The streptococcal pyrogenic exotoxins are a family of bacterial superantigens believed to be associated with streptococcal toxic shock syndrome (STSS). This family includes the bacteriophage encoded SpeA83 and SpeC, historically known...

...identified from genome sequence information. SMEZ-2 is a potent modulator of the T-cell response to S pyogenes.84 SpeL and SpeH are produced by an acute rheumatic fever strain...

...from invasive GAS infections.101 The biological functions of SpeB, as well other group A streptococcal proteinases, including C5A peptidase, and streptokinase, have recently been reviewed.102,103 Streptolysin O,104 lipoteichoic acid and peptidoglycan105 may also stimulate elaboration of cytokines.  
nly a small...

...a direct correlation between specific HLA haplotypes and the propensity to develop STSS.108

The streptococcal genome

In little over a year the complete genome sequences from three S pyogenes types...

...since the mid 1980s. This genome information provides insight into the subtle genetic differences between streptococcal serotypes that arm them to produce specific syndromes.

The GAS genomes range in size from...In addition, the pyrogenic exotoxins SpeA, SpeC, SpeH, SpeI, SpeK, SpeL, SpeM, SSA, the DNase streptodornase, mitogenicity factors MF2, MF3 (a putative nuclease), MF4, and Sla, a streptococcal phospholipase, were encoded on the various phage genomes. Insertion sequences account for some genome diversity...

...there are some DNA rearrangements that can be attributed to these sequences.

Genetic regulation of streptococcal virulence factors

Control of the expression of the described virulence factors over time and under...

...helix motifs. Regulation by Mga is responsive to environmental conditions, and Mga-dependent expression increases in response to increased carbon dioxide concentrations.56

A second adherence protein, protein F1, is regulated in response to reduced oxygen concentrations (figure 3).119 The protein F1 encoding gene is not regulated...

...system that represses expression of a number of virulence-associated genes including the has operon, streptokinase, the cysteine protease SpeB, SLO, and the CsrRS operon itself. CsrS is the bacterial sensor protein and CsrR is the repressor molecule. Inactivation of these genes results in enhanced virulence in a mouse model. CsrRS regulated genes are...

... indicates that GAS do indeed vary in their rheumatogenic potential.<sup>130</sup> Studies of outbreaks of streptococcal pharyngitis show that strains of certain M serotypes are strongly and repetitively associated with ARF<sup>131</sup>

... Lake City during two periods of peak ARF incidence 12 years apart.<sup>111, 132</sup>

Rheumatogenic streptococcal strains have distinct biological characteristics. Their M-protein molecules share a particular surface-exposed antigenic domain<sup>133</sup> against which ARF patients mount a strong IgG response.<sup>134</sup> They do not elaborate alpha-lipoproteinase (so-called serum opacity factor) and they are...

... whereas M49 is the type most frequently related to pyoderma-associated nephritis. Not all streptococcal strains belonging to these serotypes are nephritogenic, however. There are no reliable biological markers to differentiate nephritogenic from nonnephritogenic streptococci. APSGN is almost always due to strains of serogroup A. There are, however, well-documented outbreaks due to group C organisms.<sup>135</sup>

The precise mechanism by which streptococcal infection gives ... view that the renal injury is immunologically mediated. Indeed, antigenic similarities between constituents of the streptococcus and the human kidney have been described.<sup>136</sup>

The identity of the streptococcal constituent or constituents involved in the pathogenesis of APSGN remains unknown. M protein is an...

... M serotype. Indeed, monoclonal antibodies raised against human glomeruli have been seen to crossreact with streptococcal M protein.<sup>137</sup>

Moreover, in an animal model of nephritis induced by nephritogenic type 12 streptococci, antibodies eluted from the glomerulus were seen to be directed against type 12 M protein but not against other streptococcal and renal antigens.<sup>138</sup> Others, however, have described crossreactions between fragments of streptococcal cell membrane and human glomerular basement membrane<sup>135</sup> and have produced proliferative glomerular lesions in rhesus monkeys by immunisation with streptococcal membrane fragments or by intravenous injection of antibodies to these fragments.<sup>139</sup> Streptococcal pyrogenic exotoxin B (SpeB, streptococcal proteinase) was identified by immunofluorescence in two-thirds of APSGN renal biopsies, and serum titres...

... APSGN patients.<sup>141</sup> An apparently identical antigen, found in a water-soluble fraction of nephritogenic streptococci and most likely derived from streptococcal plasma membrane, has been purified and called streptococcal protein preabsorbing antigen.<sup>142</sup> Another nephritis-strain-associated protein, initially identified as an extracellular product of nephritogenic streptococci, has been characterised as a streptokinase.<sup>143</sup> It is not yet clear whether streptococcal protein preabsorbing antigen and nephritis-strain-associated protein are identical or distinct proteins. Streptokinase production has been postulated to have a role in the pathogenesis of APSGN and, indeed...

... disease in a mouse model.<sup>144</sup> However, there is no unique reactivity to group A streptokinase in sera of APSGN patients, nor has streptokinase deposition been shown in biopsy specimens obtained early in the disease.<sup>145</sup>

Prospects for a group A streptococcal vaccine

The persistence of rheumatic fever in many developing countries of the world, the apparent...

... specific, highly conserved portions of the molecule.<sup>148</sup> The route of administration may be by injection or, preferably, by application to

the oropharyngeal mucosa. Limited phase 1 human studies are in...

SI DEBAR:

... Internalisation

M protein

Protein F1

Invasion

Hyaluronic acid capsule

M protein

Spread through tissues

Hyaluronidase

Streptokinase

SpeB (cysteine protease)

DNAse A-D

Systemic toxicity

Streptolysin O

Streptolysin S

Superantigenic exotoxins

\*The list is not exhaustive, and additional associations are being reported with...

...and selection criteria

In preparing this paper we reviewed articles in the Medline database for "Streptococcus pyogenes", with special attention to "pathogenesis", "genetics", and "virulence". In addition, we reviewed the bibliographies...

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THIS IS THE FULL-TEXT.

12/3, K/20 (Item 1 from file: 266)

DIALOG(R) File 266: FEDRI P

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00736006

IDENTIFYING NO.: 0208943 AGENCY CODE: AGRI C

Acquired immunity or innate resistance; how does the equine uterus eliminate bacteria?

pfge

ASSOCIATE INVESTIGATORS: Causey, R. C.

PERFORMING ORG: UNIVERSITY OF MAINE, ANIMAL & VETERINARY SCIENCES  
, ORONO, MAINE 04469

... PERFORMING ORG: ANIMAL & VETERINARY SCIENCES

... SUMMARY: of this research may therefore be formally stated as follows:

1. To characterize the mucosal response to uterine infection with *Streptococcus zooepidemicus*. 2. To define the genetic basis of antigenic variation of *Streptococcus zooepidemicus*. 3. To assess the role of mucociliary currents in protecting the equine endometrium from infection by *Streptococcus zooepidemicus*. The proposed study consists of inoculating *Streptococcus zooepidemicus* into the uterus of 5 reproductively healthy mares during over 4 estrous cycles. The study...

... healthy mares which have normal reproductive tracts and have demonstrated the ability to clear a

streptococcal intrauterine inoculum. Prior to each inoculation serum, nasal and uterine washes will be collected for

assessment of Streptococcal specific IgG and IgA. Clearance of streptococci will be assessed by a single quantitative uterine flush culture 12 hours post inoculation. Additional sampling will be performed prior to the first inoculation to more firmly establish a baseline, and after the last inoculation to detect a response arising some weeks after the last infection. Immune responses will be assessed by western blotting and ELISA of collected samples. Over the experimental period, H1 predicts increasing levels of streptococcal IgG and IgA in mucosal washings and progressively lower numbers in uterine flushes following inoculation. Twenty three isolates of Streptococcus zooepidemicus have been typed by Sma I restriction enzyme digestion followed by pulsed-field gel...

...PROGRESS REPORT SUMMARY: SK, Paccamonti DL, Elts BE, LeBlanc MM Alteration of the uterine epithelium in chronically infertile mares. Animal Reproduction Science 2009 (under review) Gores-Lindholm AR, Ahlswedel S, Causey RC, Calderwood-Mays M, and LeBlanc MM Effect of intra-uterine infusion of diluted N-acetylcysteine on equine endometrium Proceedings of the American Association of Equine Practitioners ...

...Kelley A, Stephenson LA, Opitz HM, Guilmain S, Timoney JF. Immunisation of the equine uterus against Streptococcus equi subspecies zooepidemicus using an intranasal attenuated Salmonella vector. 2009 The Veterinary Journal (in press doi:10.1016/j.tvjl.2009.05...  
DESCRIP TORS: equine; uterus; infertility; streptococcus; zooepidemicus; muco-ciliary; mucosal immunity; pfge

12/3, K/21 (Item 2 from file: 266)  
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00733702

IDENTIFYING NO.: 0206055 AGENCY CODE: AGRI C  
A ZEBRAFISH MODEL OF LANCEFIELD GROUP C STREPTOCOCCAL PATHOGENESIS  
group c streptococcus  
ASSOCIATE INVESTIGATORS: Maddox, C. W; Pinkerton, M; Borst, L.  
PERFORMING ORG: UNIVERSITY OF ILLINOIS, VETERINARY RESEARCH & EXTENSION  
, URBANA, ILLINOIS 61801

A ZEBRAFISH MODEL OF LANCEFIELD GROUP C STREPTOCOCCAL PATHOGENESIS  
SUMMARY: (1) Determine the ID50 for intramuscular (IM) and intraperitoneal (IP) routes of infection and compare patterns of infection and pathogenesis in zebrafish. (2) Demonstrate a correlation between specific combinations of phenotype and genotype with attenuation in zebrafish. (3) Evaluate the potential for recombination in vivo following co-infection of zebrafish...

... Demonstrate that the BLIS producing S. zoo strain LBC50 and/or its antimicrobial product will attenuate infection with S. equi. We will compare patterns of pathogenesis using H&E stained sections...

...ID50 of one S. zoo and 2 S. equi strains will be determined for both intramuscular (IM) and intraperitoneal (IP) routes of infection using 12 groups of 6 zebrafish per strain. Detection of attenuation in previously characterized laboratory strains of S. equi will be performed using 6 groups of...

...zebrafish. Finally, we will determine if BLIS or a BLIS-producing strain of S. zoo attenuates infection with S. equi following therapeutic treatment of the water or co-infection in groups ...

... be performed. PR the zebrafish host (*Danio rerio*) has been developed. The model successfully detects attenuation in strains of *S. equi* when injected into the dorsal musculature with approximately 1 million organisms. Survival curves for mock injected controls (saline), wild type (WT) strains and modified live vaccine (VX) strains were compared using Kaplan Meier analysis. A strong affect was observed in fish groups injected with WT and Vx strains versus mock injected controls (chi squared = 21.39, p=0.0009). Comparison of WT to VX strains yielded a statistically significant

increase in median survival time among the VX injected group (Z = -3.173, p=0.00151). Evaluation of survival curves between a strain of *Streptococcus equi* ssp. *zooepidemicus* (LBC50) isolated in our laboratory and WT and VX strains was performed. Groups of fish injected with LBC50 had survival curves similar to VX strains with no significant difference observed between median survival times of fish injected with the VX strain or *S. zoo*, and a similar statistically significant increase in median...

... examination of all groups of fish is in progress; however preliminary data suggests that fish injected with WT strains

demonstrate rapid mobilization of bacteria both via septic spread and direct extension far ahead of the inflammatory response. Increased monocyte trafficking with clearly visible intracytoplasmic cocci was frequently observed in the gill vasculature of groups of fish inoculated with WT strains. Monocyte trafficking was not a prominent feature in VX or LBC50 injected groups. In situ hybridization using formalin fixed paraffin imbedded sections of infected zebrafish remains in ...

... in situ PCR to increase target availability and amplify signal. Promising applications of the zebrafish/streptococcal model include high throughput screening for attenuated mutants as possible vaccine candidates and may be instrumental in determining the relative importance of ...

DESCRIP TORS: *streptococcus equi* subsp. *equi*; *streptococcus equi* subsp. *zooepidemicus*; zebrafish; *danio rerio*; strangles; animal model; group c *streptococcus*

12/3, K/22 (Item 3 from file: 266)

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00723681

IDENTIFYING NO.: 0193155 AGENCY CODE: AGRI C

Intranasal Vaccination to Immunize Uterine Mucosae

animal physiology

ASSOCIATE INVESTIGATORS: Causey, R. C.

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Intranasal Vaccination to Immunize Uterine Mucosae

... PERFORMING ORG.: ANIMAL AND VETERINARY SCIENCES

... SUMMARY: To characterize uterine, vaginal and nasal antibody responses against *Salmonella typhimurium* and SzP protein of *Streptococcus zooepidemicus* MB9, following intranasal vaccination of *Salmonella typhimurium* expressing MB9 SzP protein. 2. To determine the effect of vaccination on uterine clearance of an intrauterine challenge of *Streptococcus zooepidemicus* MB9. Seven mares will be vaccinated with *Salmonella typhimurium* pET20-b/MB9, which expresses the ...



... early summer of the following year to boost immunity, sampled to confirm boosting, and then intrauterinely challenged with 10 billion colony forming units of *S. zooepidemicus* MB9. Uterine clearance of the challenge inoculum by the vaccinated mares and the controls will be compared by quantitative cervical culture at 2, 6, 12, 48 and 96 hours post inoculation. PR and nasal antibody responses against *S. typhimurium* and SzP protein of *S.*

*zooepidemicus* MB9, following intranasal vaccination of *S. typhimurium* expressing MB9 SzP protein. Significant findings: Vaccinated horses remained normal on...

... to SzP-MB9 were high in serum of all vaccinated horses. Increased post-vaccination uterine response to SzP-MB9 appeared in 3 horses with low

pre-vaccination anti-SzP-MB9 IgA...

... post-vaccination uterine responses were slightly negative. By absorbing out cross-reacting antibodies to other streptococcal strains in sera, we have now been able to detect significant immune responses to SzP...

... met and explanation 2. To determine the effect of vaccination on uterine clearance of an intrauterine challenge of *S. zooepidemicus* MB9.

This is the last phase of the project to be completed. The planned trial

... PROGRESS REPORT SUMMARY: Weber JA, \*Crowley IF, Homola AD, Qpitz HM, Stephenson LA, Guilmain S, Timoney JF (2005) Immunization of the equine uterus using an intranasal attenuated *Salmonella* vector. (The Veterinary Journal - under review). Causey R, Artiushin S, Weber J, Qpitz M, Crowley I, Homola A, Stephenson L, Guilmain S, Timoney J. Intranasal Vaccination of Mares to Protect Against Streptococcal Uterine Infections. (Eighth Annual Conference of Vaccine Research, National Foundation of Infectious

Diseases, May 4-6...

... Homola A, Stephenson L, Guilmain S, Timoney J. The Uterine Mucosal Immune Response in Mares Following Intranasal Vaccination. (Society for Theriogenology Annual Conference August 2004).

DESCRIPTORS: streptococcus; zooepidemicus; salmonella; typhimurium; uterus; application methods; immunization; mucosa; bacterial diseases (animals); disease control; disease prevention; horses; mares; equines; vagina; respiratory system; immune response; antigen antibody reaction; efficacy; subunit vaccines; clearance rate; animal physiology

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Set	Items	Description
S1	99	E1- E12
S2	3	S1 AND STREP?
S3	57	E1- E12
S4	15	S3 AND CANINE
S5	65	E1- E12
S6	2	S5 AND STREP?
S7	22815	(( ZOOEPI DEM CUS AND STREP?) OR (MYCOPLASMA)) AND ( ANI MAL OR CANI NE OR DOG OR PUP?)
S8	6994	S7 AND ( RESPONSE OR I NTRA? OR I NOCUL? OR I NJECT? OR I MMUNI - Z? OR ADM I NS?)
S9	843	S8 AND ( I NACTI V? OR ATTENUAT? OR WEAK?)
S10	517	RD (uni que i tems)
S11	22	S10 AND ( ZOOEPI DEM CUS OR CYNOS)
S12	22	RD (uni que i tems)